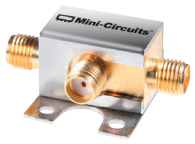
*Coaxial*

# Frequency Mixer

## ZX05-30W+

Level 7 (LO Power +7 dBm) 300 to 4000



CASE STYLE: FL905

| Connectors | Model |
|---|---|
| **SMA** | ZX05-30W-S+ |

***+RoHS Compliant***

*The +Suffix identifies RoHS Compliance. See our web site for RoHS Compliance methodologies and qualifications*

### Maximum Ratings

| | |
|---|---|
| Operating Temperature | -40°C to 85°C |
| Storage Temperature | -55°C to 100°C |
| RF Power | 50mW |
| IF Current | 40mA |

Permanent damage may occur if any of these limits are exceeded.

### Coaxial Connections

| | |
|---|---|
| LO | 1 |
| RF | 2 |
| IF | 3 |

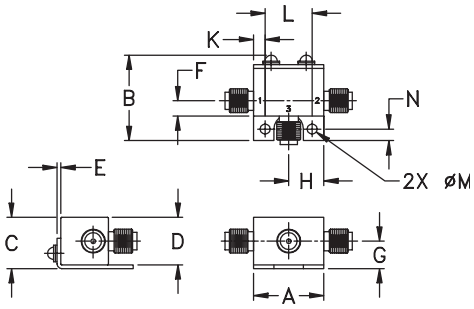
### Features

- rugged construction
- small size
- low conversion loss
- high L-R isolation
- protected by US Patents 6,133,525 & 6,790,049

### Applications

- cellular
- PCS
- instrumentation
- satellite communication

### Outline Drawing




### Outline Dimensions ( inch / mm )

| A | B | C | D | E | F | G |
|---|---|---|---|---|---|---|
| .74 | .90 | .54 | .50 | .04 | .16 | .29 |
| 18.80 | 22.86 | 13.72 | 12.70 | 1.02 | 4.06 | 7.37 |

| H | J | K | L | M | N | wt |
|---|---|---|---|---|---|---|
| .37 | -- | .122 | .496 | .106 | .122 | grams |
| 9.40 | -- | 3.10 | 12.60 | 2.69 | 3.10 | 20.0 |

### Electrical Specifications ($T_{AMB}$=25°C)

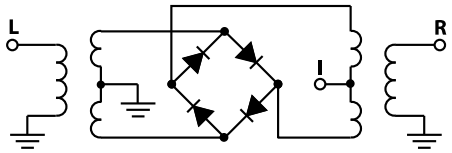
| FREQUENCY (MHz) | | CONVERSION LOSS (dB) | | | | LO-RF ISOLATION (dB) | | LO-IF ISOLATION (dB) | | IP3 at center band (dBm) |
|---|---|---|---|---|---|---|---|---|---|---|
| LO/RF | IF | Mid-Band m | | | Total Range | | | | | |
| $f_L$-$f_U$ | | $\overline{X}$ | σ | Max. | Max. | Typ. | Min. | Typ. | Min. | Typ. |
| 300-4000 | DC-950 | 6.8 | 0.2 | 9.0 | 9.8 | 35 | 17 | 16 | 7 | 12 |

1 dB COMP.: +1 dBm typ.
m= mid band [$2f_L$ to $f_U/2$]

### Typical Performance Data

| Frequency (MHz) | | Conversion Loss (dB) | Isolation L-R (dB) | Isolation L-I (dB) | VSWR RF Port (:1) | VSWR LO Port (:1) |
|---|---|---|---|---|---|---|
| RF | LO | LO +7dBm | LO +7dBm | LO +7dBm | LO +7dBm | LO +7dBm |
| 300.10 | 330.10 | 5.34 | 45.30 | 34.86 | 2.04 | 5.44 |
| 450.10 | 480.10 | 4.98 | 41.41 | 32.02 | 1.54 | 3.61 |
| 600.10 | 630.10 | 5.02 | 39.35 | 28.89 | 1.73 | 3.17 |
| 781.35 | 751.35 | 5.11 | 37.95 | 28.09 | 2.81 | 2.51 |
| 943.85 | 913.85 | 6.22 | 37.02 | 28.05 | 3.48 | 1.97 |
| 1106.35 | 1076.35 | 6.36 | 39.38 | 23.65 | 2.77 | 1.70 |
| 1268.85 | 1238.85 | 6.45 | 42.76 | 20.82 | 2.59 | 1.80 |
| 1431.35 | 1401.35 | 5.84 | 40.76 | 18.75 | 3.06 | 2.17 |
| 1675.10 | 1645.10 | 7.37 | 37.69 | 16.07 | 1.89 | 2.72 |
| 1837.60 | 1807.60 | 7.03 | 37.60 | 14.80 | 2.87 | 3.10 |
| 2000.10 | 1970.10 | 7.54 | 37.84 | 13.54 | 3.39 | 3.13 |
| 2211.87 | 2181.87 | 7.80 | 37.90 | 12.47 | 3.19 | 3.29 |
| 2435.39 | 2405.39 | 7.94 | 38.15 | 11.59 | 3.90 | 3.27 |
| 2658.92 | 2628.92 | 7.71 | 39.90 | 10.55 | 4.70 | 3.21 |
| 2882.45 | 2852.45 | 7.49 | 44.86 | 9.56 | 4.72 | 2.76 |
| 3105.98 | 3075.98 | 6.88 | 38.93 | 10.01 | 4.06 | 1.96 |
| 3329.51 | 3299.51 | 6.50 | 39.01 | 11.39 | 2.83 | 1.89 |
| 3553.04 | 3523.04 | 6.26 | 41.76 | 14.66 | 2.41 | 2.39 |
| 3776.57 | 3746.57 | 6.25 | 38.02 | 19.20 | 1.48 | 3.74 |
| 4000.10 | 3970.10 | 6.55 | 34.99 | 25.24 | 1.19 | 5.27 |

### Electrical Schematic




Notes

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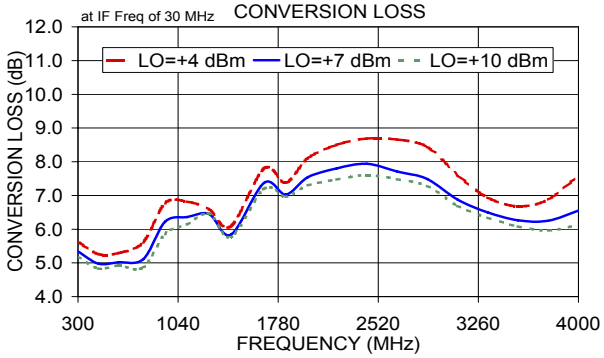
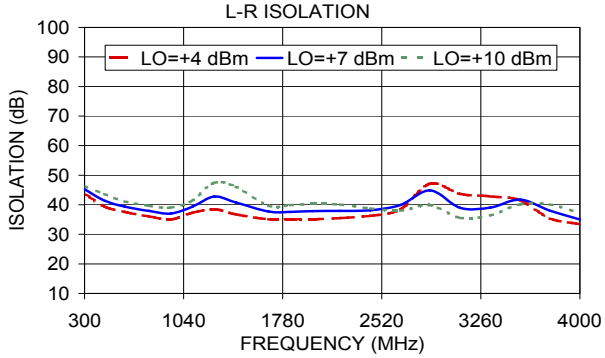
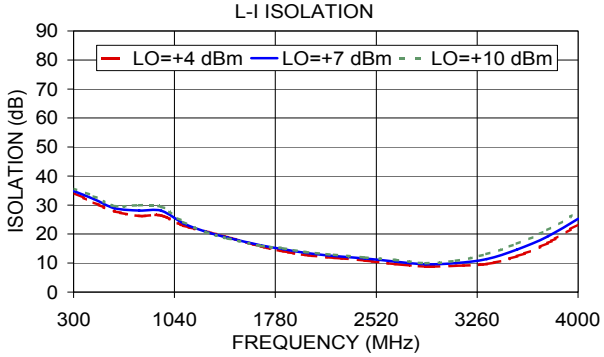
ZX05-30W+
at IF Freq of 30 MHz
CONVERSION LOSS



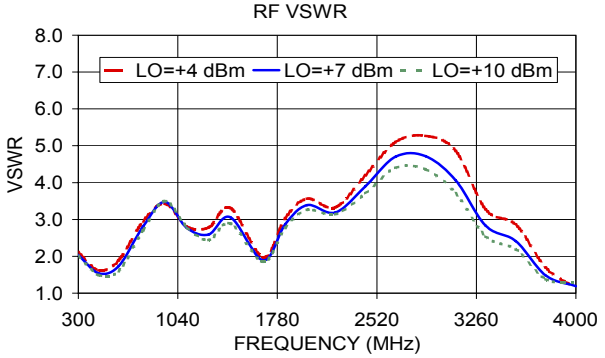

ZX05-30W+
L-R ISOLATION



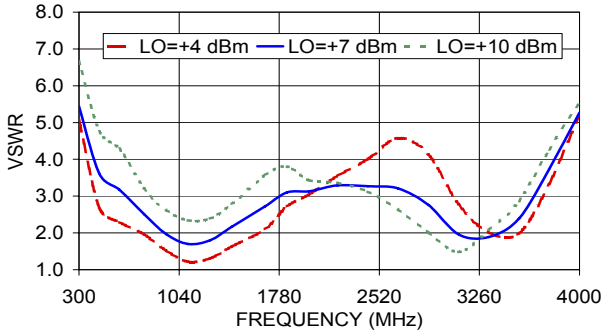

ZX05-30W+
L-I ISOLATION



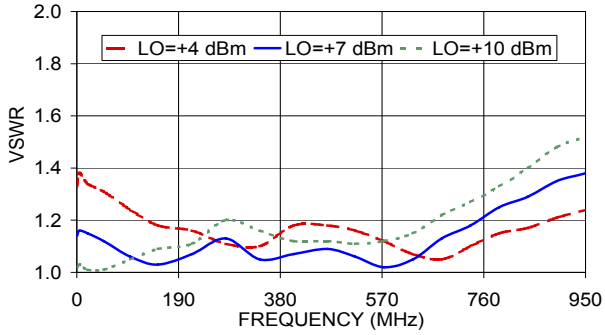

ZX05-30W+
RF VSWR



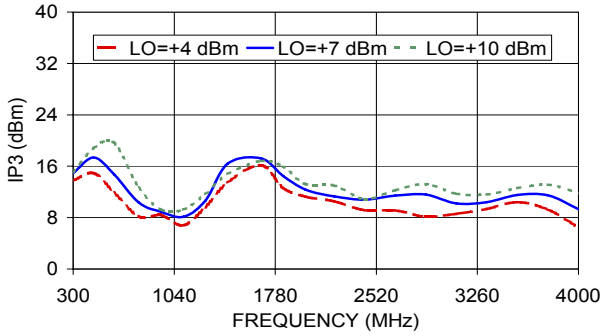

ZX05-30W+
LO VSWR




ZX05-30W+
IF VSWR




ZX05-30W+
IP3

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